

## Earth-Friendly Gardening & Landscaping

# The GreenMan



## A Corny Solution to Weeds

Homeowners looking to control weeds in their lawn often grapple with the difficult choice of using toxic herbicides, pulling them by hand, or simply tolerating patches of dandelions and crabgrass. Fortunately, there is now a safe, organic alternative brought to us by our corn-centric friends in Iowa.

During a research project on fungal diseases in the late 1980s, Iowa State horticulturist Dr. Nick Christians discovered that corn gluten meal revealed an amazing ability to suppress the germination of many common weed seeds. It was an herbicide as harmless as cornflakes! In fact, corn gluten meal has long been used as a feed additive for cattle and poultry, and is found in fish and dog food.

Subsequent research determined that this simple yellowish material, the byproduct of the wet-milling process, not only prevented weed seeds from gaining a foothold in turf areas, but the 10 percent nitrogen content of the gluten provided an excellent slow-release fertilizer for lawns, making it an ideal weed-and-feed combination.

Furthermore, by providing a natural, slow-release nutrient source, the corn gluten meal would also

encourage lush, deep-rooted turf-grass which would also crowd out existing weeds.

Today, there are at least 12 different companies (see below) marketing Dr. Christians' wisely-patented discovery, and popularity is growing, especially among parents of toddlers and small children, as well as pet owners, concerned about the impacts of synthetic pesticide residues.

The beauty of corn power is its simplicity. As bakers well know, there's a great deal of essential protein in the gluten derived from grains, and it's the 60 percent protein material in this byproduct that keeps weeds from germinating. Technically, the amino acids in the protein fraction of the gluten meal inhibit a seed's ability to develop feeder roots or root systems. Without access to water or other



nutrients, the emerging weed seedling withers and dies, often while in the seed coat.

Keep in mind that corn gluten meal is strictly a pre-emergent herbicide, and will not impact already established seedlings or plants. That means that it's ideal for established lawns, but should not be used when seeding or overseeding a lawn, as grass seed will not germinate either. Make sure that your grass seed has started growing before giving it the corn treatment.

Typically, corn gluten meal is applied in late summer and early spring, and must be timed to be in place before weed seeds germinate. Knowing when specific weeds release seeds is the best way to time your application. Advice about weeds, weed identification, and germination is available from the Cooperative Extension Service, or horticulturists at reputable garden centers.

Also, as timing is everything, you should not apply your corn gluten meal too far in advance, as natural microbial action will eventually break down the protein making it ineffective for weed control, although it will still serve as lawn food.

Recommended application rates vary, and you should follow printed instructions carefully, but normally 20 pounds per 1,000 square feet is suitable. Also, granulated or pelletized forms are preferred for use with spreaders, and will also

release nutrients more slowly than the powdery form found in agricultural supply stores.

After application, it is important to finely moisten the entire area to "activate" the proteins in the corn gluten meal and release them into the soil, thereby establishing your natural barrier to weed germination.

Admittedly, this natural alternative is more costly than traditional chemical weed-and-feed formulations, especially on larger turf areas, although corn power advocates consider it a wise investment in a healthier environment. However, avoid the temptation of using a lower application rate to save money, which can dramatically reduce the effectiveness of weed suppression.

On the other hand, Dr. Christians' research found that actually applying the corn gluten twice a year for several years provided a cumulative benefit of weed control. For example, crab grass growth was suppressed by roughly 50 to 60 percent the first year, 80 to 85 percent the second year, up to almost 100 percent by the end of a four year application process.

In addition to crab grass, pre-emergent control has proved effective with plantain, curly dock, clover, lamb's quarters, ground ivy, purslane, dandelions, and many others. Keep in mind that this approach will not eliminate existing perennial weeds like dandelions and plantain, but it will prevent those weeds from spreading.

It is important to combine the use of corn gluten meal with appropriate lawn care practices, such as periodic aerating, which will help eliminate plantain, mowing at optimal heights, which will result in a thick, vigorous lawn able to squeeze out invaders like dandelions, in addition to grasscycling clippings, proper watering, and testing soil to best assess any additional liming or nutrient needs.

### **A Brief List of Commonly Available Brand Names**

BioWeed  
Concern Weed Prevention Plus  
Corn Weed Blocker  
Dynaweed  
Earth Friendly  
GreenSense  
Organic WEEDZSTOP  
Propac  
Safe 'N Simple  
Safe Earth Natural Weed Control  
Suppressa  
W.O.W.!, Corn Gluten Meal  
WeedBAN  
WeedFREE  
Weed-Stopper Plus



The GreenMan Show is produced for County Cable Montgomery by the Department of Environmental Protection (DEP) and the Office of Public Information. It airs daily on Cable Channel 6 and can also be

viewed on the Internet. For a complete schedule and online access, visit [www.greenmanshow.com](http://www.greenmanshow.com).

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